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CARR & FERRELL LLP 2200 GENG ROAD PALO ALTO, CA 94303			EXAMINER RAYYAN, SUSAN F	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/803,111	Applicant(s) GOLDICK ET AL.	
	Examiner SUSAN FOSTER RAYYAN	Art Unit 2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/19/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-39 are pending.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on February 19, 2008 was filed before Final Office Action. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

the claimed invention is directed to non-statutory subject matter.

4. Claims 10-19, 30-38, 39 are rejected as being directed to non-statutory subject matter.

Claims 10-19 are directed to a system for storage filing , the system comprising: a first storage filer coupled to a communication network and a storage network and configured to generate file service data for a file service, associate the file service with an identification, allocate the file service data to at least one memory page in the first storage filer based on the identification, determine an indication to transfer the file service from the first storage filer, determine an optimal time to suspend file operations of the file service, and transfer the at least one memory page using the identification from the first

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storage filer during the optimal time; and second storage filer configured to receive the at least one memory page. At least one of the claimed elements of a system claim must include physical hardware. Examiner has interpreted the claimed a first storage filer and second storage filer as software per se. The claim is software per se and therefor directed to non-statutory subject matter.

Claims 30-38 are directed to a first storage filer located between a communication network and a storage network, the first storage filer comprising: a processor configured to determine an indication to transfer a file service from the first storage filer, determine an optimal time to suspend file operations of the file service, and identify an available storage filer to receive the file service; an interface configured to transmit at least one memory page with file service data of the file service from the first storage filer to the available storage filer using an identification for the file service during the optimal time; and a memory configured to store the at least one memory page. At least one of the claimed elements of an apparatus claim must include physical hardware. Examiner has interpreted the claimed a processor configured to determine an indication to transfer a file service ... and an interface configured to transmit at least one memory page ... and a memory configured to store the at least one memory page as software per se. The claim is software per se and therefor directed to non-statutory subject matter.

Claim 39 is directed to a first storage filer located between a communication network and a storage network, the first storage filer comprising:
means to determine an indication to transfer a file service from the first storage filer, means to identify an available storage filer to receive the file service, means to determine an optimal time to suspend file operations of the file service, and means to transmit at least one memory page with file service data of the file service from the first storage filer to the available storage filer using an identification for the file service during the optimal time. At least one of the claimed elements of an apparatus claim must include physical hardware. Examiner has interpreted the claimed means to determine an indication to transfer a file service from the first storage filer, means to identify an available storage filer to receive the file service, means to determine an optimal time to suspend file operations of the file service, and means to transmit at least one memory page ... to the available storage filer using an identification for the file service during the optimal time as software per se. The claim is software per se and therefor directed to non-statutory subject matter.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which

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said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Number 6,920,579 issued to Samuel M. Cramer et al (Cramer”) and US Patent Number 5,860,116 issued to Peter Washington (“Washington”) and US Patent Publication 2003/0149736 issued to Brian Berkowitz et al (“Berkowitz”).

As per independent claim 1 Cramer teaches:

A method of moving a file service within a plurality of storage filers coupled to a communication network and a storage network (Abstract), the method comprising:

generating file service data for the file service in a first storage filer (column 5, lines 37-38, file service data equates to state information);

associating the file service with an identification (column 6, lines 39-45);

allocating the file service data to at least one memory ... in the first storage filer based on the identification (column 6, lines 41-45, state information stored in mass storage device non-volatile random access memory);

determining an indication to transfer the file service from the first storage filer (column 2, lines 59-64).

Cramer does not explicitly teach transferring the at least one memory page using the identification from the first storage ... to a second storage....

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Washington does teach this limitation (column 2, lines 29-36) to efficiently control location of memory pages. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Cramer with transferring the at least one memory page using the identification from the first storage ... to a second storage to efficiently control location of memory pages as described by Washington (column 1, lines 34-36).

Cramer and Washington do not explicitly teach determining an optimal time to suspend file operations of the file service. Berkowitz teaches this limitation (at paragraph 64, as instruct writers to stop writing and wait a predetermined amount of time to allow existing access requests to complete before proceeding) to effectively communicate with writers such that the writers do not attempt to access or modify a volume of information while a copy is being made and to prevent access updates or inaccurate point-in-time copy information. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Cramer and Washington with determining an optimal time to suspend file operations of the file service to effectively communicate with writers such that the writers do not attempt to access or modify a volume of information while a copy is being made and to prevent access updates or inaccurate point-in-time copy information as described by Berkowitz at (paragraph 64).

As per claim 2, same as claim argument above and Cramer teaches:

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further comprising identifying the second storage filer (column 6, lines 41-45, Filer B).

As per claim 3, same as claim argument above and Cramer teaches:
wherein identifying the second storage filer comprises determining whether the second storage filer has adequate memory for the at least one memory page (column 6, lines 41-45, storing a mirror copy in main storage of filer b).

As per claim 4, same as claim argument above and Cramer teaches:
further comprising transmitting a message to clients for the file service connected to the communication network to communicate with the second storage filer (column 3, lines 13-15).

As per claim 5, same as claim argument above and Cramer teaches:
further comprising suspending file operations of the file service (column 3, lines 12-13, first filer ceases accepting new requests).

As per claim 6, same as claim argument above and Washington teaches:
further comprising reducing unused space in the at least one memory page (column 2, lines 30-36).

As per claim 7, same as claim argument above and Washington teaches:

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further comprising fixing pointers related to the at least one memory page (column 4, lines 53-55, updated to point to new page).

As per claim 8, same as claim argument above and Cramer teaches: wherein determining the indication is based on a policy to transfer the file service from the first storage filer (column 2, lines 59-64, policy to transfer associated with running the routine maintenance and upgrades).

As per claim 9, same as claim argument above and Cramer teaches: wherein determining the indication further comprises receiving an instruction to transfer the file service from the first storage filer (column 3, lines 29-31, operator initiates take over by a command).

As per independent claim 10 Cramer teaches:

A system for storage filing (Abstract), the system comprising:
a first storage filer coupled to a communication network and a storage network and configured to generate file service data for a file service(column 5, lines 37-38, file service data equates to state information), associate the file service with an identification(column 6, lines 39-45), allocate the file service data to at least one memory ..in the first storage filer based on the identification(column 6, lines 41-45, state information stored in mass storage device non-volatile random access memory), determine an indication to transfer the file service from the first storage filer(column 2, lines 59-64).

Cramer does not explicitly teach transfer the at least one memory page using the identification from the first storage ... and a second storage... configured to receive the at least one memory page. Washington does teach this limitation (column 2, lines 29-36) to efficiently control location of memory pages. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Cramer with transfer the at least one memory page using the identification from the first storage... and a second storage ... configured to receive the at least one memory page to efficiently control location of memory pages as described by Washington (column 1, lines 34-36).

Cramer and Washington do not explicitly teach determine an optimal time to suspend file operations of the file service. Berkowitz teaches this limitation (at paragraph 64, as instruct writers to stop writing and wait a predetermined amount of time to allow existing access requests to complete before proceeding) to effectively communicate with writers such that the writers do not attempt to access or modify a volume of information while a copy is being made and to prevent access updates or inaccurate point-in-time copy information. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Cramer and Washington with determining an optimal time to suspend file operations of the file service to effectively communicate with writers such that the writers do not attempt to access or modify a volume of information while a copy is being made and to prevent access updates or inaccurate point-in-time copy information as described by Berkowitz at (paragraph 64).

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As per claim 11, same as claim argument above and Cramer teaches:

wherein the first storage filer is configured to identify the second storage filer (column 6, lines 41-45, Filer B).

As per claim 12, same as claim argument above and Cramer teaches:

wherein the first storage filer is configured to identify the second storage filer by determining whether the second storage filer has adequate memory for the at least one memory page(column 6, lines 41-45, storing a mirror copy in main storage of filer b).

As per claim 13, same as claim argument above and Cramer teaches:

wherein the first storage filer is configured to transmit a message to clients for the file service connected to the communication network to communicate with the second storage filer (column 3, lines 13-15).

As per claim 14, same as claim argument above and Cramer teaches:

wherein the first storage filer is configured to suspend file operations of the file service ... (column 3, lines 12-13, first filer ceases accepting new requests).

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As per claim 15, same as claim argument above and Washington teaches:
wherein the first storage filer is configured to reduce unused space in the at least one memory page (column 2, lines 30-36).

As per claim 16, same as claim argument above and Washington teaches:
wherein the second storage filer is configured to fix pointers related to the at least one memory page (column 4, lines 53-55, updated to point to new page).

As per claim 17, same as claim argument above and Cramer teaches:
wherein the first storage filer is configured to determine the indication is based on a policy to transfer the file service from the first storage filer (column 2, lines 59-64, policy to transfer associated with running the routine maintenance and upgrades).

As per claim 18, same as claim argument above and Cramer teaches:
wherein the first storage filer is configured to receive an instruction to transfer the file service from the first storage filer (column 3, lines 29-31, operator initiates take over by a command).

As per independent claim 19 Cramer teaches:

A system for storage filing coupled to a communication network and a storage network (Abstract), the system comprising:

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means for generating file service data for a file service in a first storage filer

(column 5, lines 37-38, file service data equates to state information);

means for associating the file service with an identification (column 6, lines 39-45);

means for allocating the file service data to at least one memory page in the first storage filer based on the identification (column 6, lines 41-45, state information stored in mass storage device non-volatile random access memory);

means for determining an indication to transfer the file service from the first storage filer (column 2, lines 59-64).

Cramer does not explicitly teach means for transferring the at least one memory page using the identification from the first storage ... to a second storage Washington does teach this limitation (column 2, lines 29-36) to efficiently control location of memory pages. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Cramer with transferring the at least one memory page using the identification from the first storage ... to a second storage to efficiently control location of memory pages as described by (column 1, lines 34-36).

Cramer and Washington do not explicitly teach means for determining an optimal time to suspend file operations of the file service. Berkowitz teaches this limitation (at paragraph 64, as instruct writers to stop writing and wait a predetermined amount of time to allow existing access requests to complete before proceeding) to effectively communicate with writers such that the writers do not attempt to access or modify a volume of information while a copy is being

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made and to prevent access updates or inaccurate point-in-time copy information. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Cramer and Washington with determining an optimal time to suspend file operations of the file service to effectively communicate with writers such that the writers do not attempt to access or modify a volume of information while a copy is being made and to prevent access updates or inaccurate point-in-time copy information as described by Berkowitz at (paragraph 64).

As per claim 20 Cramer teaches:

A method of moving a file service in a first storage filer located between a communication network and a storage network(Abstract), the method comprising: determining an indication to transfer a file service from the first storage filer(column 2, lines 59-64);

identifying an available storage filer to receive the file service (column 2, lines 6, second filer may takeover from first filer);

an identification for the file service (column 6, lines 39-45).

Cramer does not explicitly and transmitting at least one memory page with file service data of the file service from the first storage ... to the available storage Washington does teach this limitation (column 2, lines 29-36) to efficiently control location of memory pages. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Cramer with and transmitting at least one memory page with file service data of the file service from the first

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storage ... to the available storage ... to efficiently control location of memory pages as described by (column 1, lines 34-36).

Cramer and Washington do not explicitly teach determining an optimal time to suspend file operations of the file service. Berkowitz teaches this limitation (at paragraph 64, as instruct writers to stop writing and wait a predetermined amount of time to allow existing access requests to complete before proceeding) to effectively communicate with writers such that the writers do not attempt to access or modify a volume of information while a copy is being made and to prevent access updates or inaccurate point-in-time copy information. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Cramer and Washington with determining an optimal time to suspend file operations of the file service to effectively communicate with writers such that the writers do not attempt to access or modify a volume of information while a copy is being made and to prevent access updates or inaccurate point-in-time copy information as described by Berkowitz at (paragraph 64).

As per claim 21, same as claim argument above and Cramer teaches:
further comprising: generating the file service data for a file service in a first storage filer (column 5, lines 37-38, file service data equates to state information);

associating the file service with the identification (column 6, lines 39-45)...

As per claim 22, same as claim argument above and Cramer teaches:

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further comprising allocating the file service data to the at least one memory page in the first storage filer based on the identification(column 6, lines 41-45, state information stored in mass storage device non-volatile random access memory).

As per claim 23, same as claim argument above and Cramer teaches:
wherein identifying the available storage filer comprises determining whether the available storage filer has adequate memory for the at least one memory page (column 6, lines 41-45, storing a mirror copy in main storage of filer b).

As per claim 24, same as claim argument above and Cramer teaches:
further comprising transmitting a message to clients for the file service connected to the communication network to communicate using an address of the available storage filer (column 3, lines 13-15).

As per claim 25, same as claim argument above and Cramer teaches:
further comprising suspending file operations of the file service (column 3, lines 12-13, first filer ceases accepting new requests).

As per claim 26, same as claim argument above and Washington teaches:
further comprising reducing unused space in the at least one memory page (column 2, lines 30-36).

As per claim 27, same as claim argument above and Washington teaches:

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further comprising fixing pointers related to the at least one memory page (column 4, lines 53-55, updated to point to new page).

As per claim 28, same as claim argument above and Cramer teaches:

wherein the file service comprises a Common Internet File System session/service (column 4, lines 54-56, Common Internet File System).

As per claim 29, same as claim argument above and Cramer teaches:

wherein the file service comprises a Network File System session/service (column 4, lines 53-54, Network File System).

As per independent claim 30 Cramer teaches:

A first storage filer located between a communication network and a storage network (Abstract), the first storage filer comprising:

a processor configured to determine an indication to transfer a file service from the first storage filer(column 2, lines 59-64) and identify an available storage filer to receive the file service(column 2, lines 6, second filer may takeover from first filer);

an identification for the file service (column 6, lines 39-45).

Cramer does not explicitly an interface configured to transmit at least one memory page with file service data of the file service from the first storage ... to

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the available storage ... and a memory configured to store the at least one memory page. Washington does teach this limitation (column 2, lines 29-36) to efficiently control location of memory pages. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Cramer with to transmit at least one memory page with file service data of the file service from the first storage ... to the available storage ... and a memory configured to store the at least one memory page to efficiently control location of memory pages as described by (column 1, lines 34-36).

Cramer and Washington do not explicitly teach determine an optimal time to suspend file operations of the file service. Berkowitz teaches this limitation (at paragraph 64, as instruct writers to stop writing and wait a predetermined amount of time to allow existing access requests to complete before proceeding) to effectively communicate with writers such that the writers do not attempt to access or modify a volume of information while a copy is being made and to prevent access updates or inaccurate point-in-time copy information. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Cramer and Washington with determining an optimal time to suspend file operations of the file service to effectively communicate with writers such that the writers do not attempt to access or modify a volume of information while a copy is being made and to prevent access updates or inaccurate point-in-time copy information as described by Berkowitz at (paragraph 64).

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As per claim 31, same as claim argument above and Cramer teaches:

wherein the processor is configured to generate file service data for a file service in a first storage filer and associate the file service with the identification (column 5, lines 37-38, file service data equates to state information and column 6, lines 39-45).

As per claim 32, same as claim argument above and Cramer teaches:

wherein the processor is configured to allocate the file service data to the at least one memory page in the first storage filer based on the identification(column 6, lines 41-45, state information stored in mass storage device non-volatile random access memory).

As per claim 33, same as claim argument above and Cramer teaches:

wherein the processor is configured to determine whether the available storage filer has adequate memory for the at least one memory page (column 6, lines 41-45, storing a mirror copy in main storage of filer b).

As per claim 34, same as claim argument above and Cramer teaches:

wherein the processor is configured to transmit a message to clients for the file service connected to the communication network to communicate using an address of the available storage filer (column 3, lines 13-15).

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As per claim 35, same as claim argument above and Cramer teaches:
wherein the processor is configured to suspend file operations of the file service
... (column 3, lines 12-13, first filer ceases accepting new requests).

As per claim 36, same as claim argument above and Washington teaches:
wherein the processor is configured to reduce unused space in the at least one
memory page (column 2, lines 30-36).

As per claim 37, same as claim argument above and Cramer teaches:
wherein the file service comprises a Common Internet File System
Session/service (column 4, lines 54-56, Common Internet File System).

As per claim 38, same as claim argument above and Cramer teaches:
wherein the file service comprises a Network File System session/service
(column 4, lines 53-54, Network File System).

As per independent claim 39 Cramer teaches:

A first storage filer located between a communication network and a storage
network (Abstract), the first storage filer comprising:

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means to determine an indication to transfer a file service from the first storage filer (column 2, lines 59-64);

means to identify an available storage filer to receive the file service (column 2, lines 6, second filer may takeover from first filer);

an identification for the file service (column 6, lines 39-45).

Cramer does not explicitly teach means to transmit at least one memory page with file service data of the file service from the first storage ... to the available storage. Washington does teach this limitation (column 2, lines 29-36) to efficiently control location of memory pages. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Cramer with means to transmit at least one memory page with file service data of the file service from the first storage ... to the available storage to efficiently control location of memory pages as described by (column 1, lines 34-36).

Cramer and Washington do not explicitly teach determine an optimal time to suspend file operations of the file service. Berkowitz teaches this limitation (at paragraph 64, as instruct writers to stop writing and wait a predetermined amount of time to allow existing access requests to complete before proceeding) to effectively communicate with writers such that the writers do not attempt to access or modify a volume of information while a copy is being made and to prevent access updates or inaccurate point-in-time copy information. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Cramer and Washington with determining an optimal time to suspend file operations of the file service to effectively communicate with writers

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such that the writers do not attempt to access or modify a volume of information while a copy is being made and to prevent access updates or inaccurate point-in-time copy information as described by Berkowitz at (paragraph 64).

Response to Arguments

6. Applicant's arguments with respect to claim 1-39 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argues prior art of record does not teach determining an optimal time to suspend file operations of the file service. Berkowitz teaches this limitation (at paragraph 64, as instruct writers to stop writing and wait a predetermined amount of time to allow existing access requests to complete before proceeding) to effectively communicate with writers such that the writers do not attempt to access or modify a volume of information while a copy is being made and to prevent access updates or inaccurate point-in-time copy information. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Cramer and Washington with determining an optimal time to suspend file operations of the file service to effectively communicate with writers such that the writers do not attempt to access or modify a volume of information while a copy is being made and to prevent access updates or inaccurate point-in-time copy information as described by Berkowitz at (paragraph 64).

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Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan F. Rayyan whose telephone number is 571-272-1675. The examiner can normally be reached on M-F, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on 571-272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John R. Cottingham/
Supervisory Patent Examiner, Art
Unit 2167

Susan Rayyan

May 11, 2008